



To arrive at the edge of the world's knowledge, seek out the most complex and sophisticated minds, put them in a room together, and have them ask each other the questions they are asking themselves.

<https://www.edge.org/response-detail/25346>

Printed On Wed January 11th 2023



2014 : WHAT SCIENTIFIC IDEA IS READY FOR RETIREMENT?

[In the News \[60 \]](#)

| [Contributors \[177 \]](#) | [View All Responses \[184 \]](#)



[Jonathan Haidt](#)

Social Psychologist; Thomas Cooley Professor of Ethical Leadership, New York University Stern School of Business; Author, [The Righteous Mind](#)

The Pursuit of Parsimony

There are many things in life that are good to have yet bad to pursue too vigorously. Money, love, and sex, for example. I'd like to add parsimony to that list.

William of Ockham was a 14th-century English logician who said that "entities must not be multiplied beyond necessity." That principle—now known as "Occam's Razor"—has been used for centuries by scientists and philosophers as a tool to adjudicate among competing theories. Parsimony means frugality or stinginess, and scientists should be "stingy" when building theories; they should use as little material as possible. If two theories really do exactly as good a job of explaining the empirical evidence, then you should pick the simpler theory. If Copernicus and Ptolemy can both explain the movements of the heavens, including the occasional backwards motion of some planets, then go with Copernicus's far more parsimonious model.

Occam's razor is a great tool when used as originally designed. Unfortunately, many scientists have turned this simple tool into a fetish object. They pursue simple explanations of complex phenomena as though parsimony were an end in itself, rather than a tool to be used in the pursuit of truth.

The worship of parsimony is understandable in the natural sciences, where it sometimes does happen that a single law or principle, or a very simple theory, explains a vast and diverse set of observations. Newton's three laws really do explain the movements of all inanimate objects. Plate tectonics really does explain earthquakes, volcanoes, and the complementary coastlines of Africa and South America. Natural selection really does explain why plants, animals, and fungi look as they do.

But in the social sciences, the overzealous pursuit of parsimony has been a disaster. Since the 18th century, some intellectuals have striven to do for the social world what Newton did for the physical world. Utilitarians, the French philosophes, and other utopian dreamers longed for a social order based on rational principles and a scientific understanding of human behavior. Auguste Comte, one of the founders of sociology, originally called his new discipline "social physics."

And what do we have to show for 250 years of pursuit? We have a series of time-wasting failures and ideological battles. Human behavior cannot all be explained by positive and negative reinforcement (contra the behaviorists). Nor is it all about sex, money, class, power, self-esteem, or even self-interest, to name some of the major explanatory idols worshipped in the 20th century.

In my own field—moral psychology—we've suffered from the same overzealous pursuit of parsimony. Lawrence Kohlberg said morality was all about justice. Others say it's compassion. Others say morality is all about forming coalitions, or preventing harm to victims. But in fact morality is complicated, pluralistic, and culturally variable. Human beings are products of evolution, so the psychological foundations of morality are innate (as I and [many others](#) have argued at Edge.org in recent years.) But there are many of these foundations, and they are just the beginning of the story. You must still explain how morality develops in such variable ways around the world, and even among siblings within a single family.

The social sciences are hard because human beings differ fundamentally from inanimate objects. People insist upon making or finding meaning in things. They do it collectively, creating baroque cultural landscapes that can't be explained parsimoniously, and they do it individually, creating their own unique symbolic worlds nested within their broader cultures. As the anthropologist Clifford Geertz put it: "Man is an animal suspended in webs of significance that he himself has spun." This is why it's so hard to predict what any individual will do. This is why there are almost no equations in psychology or sociology. This is why there will never be a Newton in the social sciences.

Let's retire the pursuit of parsimony from the social sciences. Parsimony is beautiful when we find it, but the pursuit of parsimony is sometimes an obstacle to the pursuit of truth.

[Return to Table of Contents](#)

